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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,893	02/24/2004	Jan Jaap Kuit	081468-0308381	9997

909 7590 08/15/2005

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

MATHEWS, ALAN A

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/784,893	Applicant(s) KUIT, JAN JAAP	
	Examiner Alan A. Mathews	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-23 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/7/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the conveyor belt with at least one of a pin and a wire loop configured to support the substrate transported thereon as recited in claim 13 and the gangway set apart from the transport system configured to allow passage a distance away from the transport system recited in claim 14 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification does not disclose the term “gangway”. Nor does it describe how a gangway is set apart from the transport system to allow passage a distance away from the transport system.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

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subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, 5-7, 10, 11, 15, 18, 19, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Imai (U. S. Patent No. 6,737,207). Imai discloses in figures 1 and 2 and column 11, lines 11-67, columns 12 and 13, an illuminator including elements 1, 2, and 3, a support structure 31 to hold a patterning device (reticule) R, and a substrate table 39 to hold a substrate W. Element PL is the projection system. Figure 1 discloses a track and transport system 52 and one or more processing devices 54-59. Although element 50 is called the exposure apparatus, the actual exposure apparatus (lithographic apparatus) is at element 39 in figure 1. With respect to claims 4 and 7, there are at least two transporter pathways or tracks including 52, 42, and 46. With respect to claims 5 and 15, arm 44 is considered to be a transport robot. Column 1, line 15 states that arm (robot) 44 is rotated. With respect to claim 11, column 9, line 49 recites a linear motor for slider 43 on guide member 42.

6. Claims 1, 3, 7, 8, 10, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Owen et al. (U. S. Patent Application Publication No. 2005/0057733 A1). Owen et al. discloses in figures 1 and 2 and page 3, paragraphs # 30 to # 40, an illuminator IL, a support structure MT to support patterning device M. Element WT is the substrate table to support substrate W. Projection system PL is configured to project the patterned beam onto a target portion of the substrate. Track 104 comprises processing devices 106a-106d and 108a-108e. The transport system includes 104a. With respect to claim 7, elements 104a and 104b comprise a plurality of tracks. With respect to claim 10, transporter pathway 104b transports a substrate between different processing devices of the track.

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The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 5-11, 14-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U. S. Patent No. 5,963,753) in view of Imni (U. S. Patent No. 6,737,207). Ohtani et al. discloses in figure 4 and column 4, lines 45-67, and column 5, an exposure apparatus 2a (lithographic apparatus) and an exposure apparatus 2b (lithographic apparatus). Numeral 21 designates a first pathway or track and numeral 31 designates a second pathway or track. Elements 10a and 10b are processing devices along track 21. The transport system includes robot 22 and robot 32 which are each rotatable or pivotal (see column 4, line 56, and column 5, line 7). With respect to claim 9, the transport system is formable in some manner. The term

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“formable” is very broad. Thus, Ohtani et al. discloses the invention except for specifically disclosing the details of the typical exposure apparatus (lithographic apparatus). Imai discloses in figure 1 an exposure apparatus and a track and transport system. Figure 2 discloses the details of the lithographic apparatus including an illuminator including element 1, 2, and 3, a support structure 31 to hold a patterning device (reticule) R, and a substrate table 39 to hold a substrate W, and a projection system PL. Figure 8A discloses a measuring step, which would be done by metrology apparatus. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide Ohtani et al. with the typical exposure apparatus (lithographic apparatus) in place of the exposure apparatus 2a and 2b in view of Imni for the purpose of making a complete set of equipment for making integrated circuits.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U. S. Patent No. 5,963,753) in view of Imni (U. S. Patent No. 6,737,207) as applied to claim 1 above, and further in view of Wu (U. S. Patent No. 5,399,531). The modified device of Ohtani et al. and Imni disclose the invention except for the transport system comprising its own minienvironment. Wu discloses in the Abstract and branched tunnels for wafer transportation with a controlled environment and means for maintaining a clean environment in the branched tunnel. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to the modified device of Ohtani et al. and Imni with a transport system having its own minienvironment in view of Wu for the purpose of reducing defects and thus producing a better final product.

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10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U. S. Patent No. 5,963,753) in view of Imni (U. S. Patent No. 6,737,207) as applied to claim 1 above, and further in view of Sugimoto et al. (U. S. Patent No. 6,832,863). The modified device of Ohtani et al. and Imni disclose the invention except for at least two transporter pathways, one configured to transport the substrate from the track to the lithographic apparatus and one configured to transport the substrate from the lithographic apparatus to the track. Sugimoto et al. discloses in figures 15 and 24 and the Abstract and column 3, lines 20-34, the concept of having a going-only path and a returning-only path for substrates for the purpose of speeding production by eliminating interfering schedules of the going and returning of substrates. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to the modified device of Ohtani et al. and Imni with two transporter pathways to transport the substrate from the track to the lithographic apparatus and to transport the substrate from the lithographic apparatus to the track for the purpose of speeding production by eliminating interfering schedules of the going and returning of substrates.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohtani et al. (U. S. Patent No. 5,963,753) in view of Imni (U. S. Patent No. 6,737,207) as applied to claims 1 and 11 above, and further in view of Hirata et al. (U. S. Patent No. 6,604,624). The modified device of Ohtani et al. and Imni disclose the invention except for the linear guide being one of a roller bearing guide and a gas bearing guide. Hirata et al. discloses in figures 4 and 7 and column 9, lines 63-67, a roller bearing 42a and 42b for a guide rail for transporting semiconductor devices. It would have been obvious at the time the invention was made to a person having ordinary skill

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in the art to provide the modified device of Ohtani et al. and Imni with a roller bearing in view of Hirata et al. for the purpose of easier transportation of the substrates.

Allowable Subject Matter

12. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable subject to correction of the drawings to show the features recited therein and if the claim were rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reasons for the indicated allowability of the claims are as follows:

The prior art does not disclose or suggest wherein the transport system comprises a conveyor belt with at least one of a pin and a wire loop configured to support the substrate transported thereon in combination with all the other elements recited in the parent claim dependent claim 13.

Conclusion

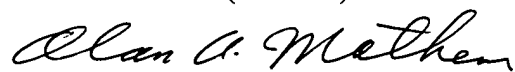
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Kirtacko et al., Yokoyama et al., White et al., and Park are cited to show transport system for substrates. The patent to Iriki is cited to show in figure 10 and 22, a transport system for transporting substrates between exposure devices P7 and other stations. Applicant's IDS filed February 7, 2005, has been considered.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan A. Mathews whose telephone number is (571) 272-2123. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alan A. Mathews
Primary Examiner
Art Unit 2851

AM